

The MINES of ARIZONA

This department is under the direction of Mr. W. E. Defty, the well known mining engineer, who will carefully scrutinize all matters relating to mining in order that only reliable information regarding legitimate enterprises shall find a place here.

The Republican would be pleased to receive information from any part of the state regarding the development of the mining industry. All communications should be addressed: Mining Department, Arizona Republican.

LETSON BALLIET

In Mining and Engineering World. About fifteen years ago I was employed to examine a mine for a mining company that had three long tunnels, and two good veins of ore. They were driving a fourth tunnel much lower down, to tap their veins 1000 feet deeper. It was a good mine—and it is a good mine today. There were about 500 stockholders in that company—I don't know who they were, for I was not a stockholder. I was only an employed engineer to make a report.

My report said: "Your mine is a good one—the opening of the vein at the great depth that will be reached by the lower tunnel should make it a big producer of ore. It will take about ten months longer to drive the lower tunnel in to the vein, and will cost about \$4,000 a month for that time. After that you can expect the mine to produce profitable ore. If you spend \$1,000 for ten months in driving the tunnel."

Do you know what those 500 stockholders did? They just sat down quietly and waited ten months, without making any more payments or furnishing any money at all. Of course the work had to stop. There wasn't money enough coming in to pay even a watchman at the mine which had already spent \$100,000.

Ten months later the stockholders began writing to me, saying that "ten months were up" and that I had said "the mine will be producing in ten months." Of course I had told them nothing of the kind. I had said that "if they furnished \$4,000 a month that they could expect the mine to be producing at the end of that time."

The man who was manager of that mine is now a very high official in a very competent man in mining operations, but at that time he was a poor man working for wages, and had to hunt another job. The stockholders quit furnishing money for his and the mine's wages.

That mine, of course, couldn't pay bills, its cars and trucks were stolen when they couldn't pay a watchman, and it was idle for years, and abandoned. Later it was taken up by others and is today a good property.

The outcome of that experience of fifteen years ago is that I learned a lesson, and that is—never set a time limit when a mine can be expected to pay. If you were to ask me when will a mine pay I would answer, "When a level has been run 1000 feet, or 200 feet, or 100 feet," or whatever work had to be done. Never in a hurry to get a mine.

You might ask me, "When can I rent rooms in a new hotel I am going to build?" The answer is, "When it is completed." I don't know whether you are going to build it in six months by rushing the work, or whether you will build it at all, or build it next year or year after. It is evident that the quicker you get it completed the sooner you begin to collect room rents.

I find that 90 per cent of the mining propositions that stop work are forced to stop by the stockholders failing to push the work—failing to provide funds. When a mine manager says, "We can have the mine producing in six months or a year," the stockholders sit down and wait a year—and the mine stands idle. Sometimes they are abandoned, and the same manager will hunt up someone else to buy it in and open it. Thus the same mine, with the same manager, becomes a big paying mine, and the stockholders accuse him of being crooked—when their real cause of loss is that they didn't furnish the money to open it and get the ore out.

If you are a stockholder in any mine, and you have set quietly by for years, without making any effort to keep your mine running, you deserve to lose every cent. The hardest part of mining is to raise funds sufficient to develop it right. You expect a secretary or a manager to "raise the money" and keep the records and direct the work. Suppose you were the secretary, could you do it? You'd expect others who were interested to raise some of the money, too, wouldn't you?

A director, or officer, is only a stockholder himself who has been elected to act as a head, or keep a record of all business. Maybe he has less stock than some of the other stockholders. Don't blame him if your work isn't going on as fast as you'd like to see it; he can't make it go faster than there is money to pay for the progress. He simply directs what money there is to the best advantage, and keeps a record of what is done. Stockholders have no one to blame but themselves for speed of progress.

There are hundreds of mines now working that were started by some former owners, who failed, and gave it up. New men took it up, and went ahead. They found the ore, and the profit the original owners might have had if they had gone ahead. With the exception of two, I think every mining mine in Tonopah and Goldfield is a reorganization—organized to raise operating finances, yet the same working methods, on the same property, and in many cases under the same management, are being used. Some of them have been changed to assessable companies to force the stockholders to come through with operating expenses and thus that money has been able to make them produce. An idle mine can't pay—it must reach its ore and take it out before it can pay. No mine can reach its ore without money to buy supplies and hire men. These are cold facts.

Mining is a business that must be developed. Mining investors frequently lose their money, and quit—or get cold feet. Quitters nearly always lose—there is no chance to win success when you quit and run away. The stickers, who finish their development, are the winners in the end.

Everybody belongs to one of the two classes—they are either "stickers" or "quitters." It makes no difference how long a quitter quits. In the first hour or in the eleventh hour, just when victory is in his grasp, the result is the same.

If you are not enthusiastic about your business you can't expect others to be. If you have no enthusiasm, and no ambition to make your business a success, don't go into it in the first place. If you start, stick. Make it a success by your own efforts.

If your mine needs funds for further development, for building ore bins, and so forth, it naturally falls on you as a stockholder, or partner, in the mine to furnish your share of that expense, before the returns can be taken from the ground. If you can't furnish 1000, or \$2500, or \$1000 right now, you can at least furnish \$10 or \$20 or perhaps \$50 a month, for a few months, which will accomplish the same result. It is strictly up to you how fast the progress is. Spread your enthusiasm and stick-to-it-iveness to your neighbors and friends, and interest them. If you were a partner in a grocery store you'd rustle your friends for patronage, and boost your business, until you became established.

THE PRICE OF SILVER

The recent spurt in the price of silver leads to the belief that a restoration to the high price of 77½ cents in May is among the possibilities. At that time the price advanced about 20 cents. With a similar rise the price would be near to the ancient parity of 16 to 1. There is, however, not at present much expectation that the price will go to any such figure.

The present demand is not only very strong from the far east, but is very heavy in Europe, where it is being coined rapidly to pay the troops. Bankers in this country have manifested great interest in the extent to which the influx of coinage will go. It amounts practically to re-opening the mints to free coinage on the old basis, but it is not believed it will extend to the extent of inflation. It is well known that all of the belligerent nations have issued immense sums of paper money, which are more or less covered by gold reserves.

One New York banker is of the opinion that free silver coinage may be adopted by all of the belligerent nations after the war simply as an alternative to repudiation of large amounts of paper money or allowing it to become greatly depreciated.

Apparently there is no general belief that such a thing will take place, although it must be admitted that important changes in world finance are to come when the war is over and national obligations are put on a permanent basis. About the only result in this country is that a number of mines long abandoned because of the low price of silver are going into commission, and this supply may have a depressing effect upon the price.

USE OF SLAG FOR FERTILIZING

Utilization of iron and steel works slags was discussed by E. C. Brown, chief engineer, Carnegie Steel Company, Pittsburgh, in a paper read before the Engineers' Society of Western Pennsylvania and printed in the January issue of the proceedings of the society. Little commercial or industrial use, he said, has been made of either open-hearth or converter slag, as compared with blast-furnace slag. When slag is high in lime it may be returned to the blast furnace as a flux. Open-hearth slag has been ground and used in agriculture as a soil corrective, giving higher and quicker results than lime applied in the usual form. At Birmingham, Ala., slag from high phosphorus local ores are being built up by recharging until they contain as high as from 12 to 18 per cent of phosphorus, thereby being about in the same class of fertilizer as imported "Thomas meal" or phosphate slag.

A dry granulation process, he mentioned also, has been developed in Germany for preparing slag for cement. The essential feature of the

TUCSON MINE EXPERIMENT STATION TO AID COLORADO

While the nearest metallurgical experiment station to Colorado, under the terms of the recent order of Secretary Lane, will be Tucson, Arizona, this state will have the benefit in rather full measure of its activities. The scope of that station, as a matter of fact, will be extremely wide and Colorado at least will have the benefit of propinquity. Also, in the person assigned to its charge, the state will have the advice and counsel of one who knows our ranges and mining riches.

But two metallurgical experiment stations are established at present under the terms of the recently passed law making provision therefor—Fairbanks, Alaska, to serve the needs of the north mining country, and Tucson to serve the familiar regions of the west.

Karl Kithil, one of the recognized leaders in metallurgical research of the bureau of mines and the man who conducted the recent radium investigations at Denver, will be in charge at the latter station. In addition to his long experience in the mining regions, Mr. Kithil has acquired an enviable knowledge of the rare minerals of Colorado. Therefore he will not be a stranger to the tasks which Colorado mining men may seek to put before him. While located at Denver, the branch of the bureau of mines dealing mainly with radium and tungsten ores received countless requests for aid from

prospectors who shipped simultaneously with their letters every conceivable character of rock produced in the state bearing the slightest suspicion of containing mineral wherewithal man might become enriched. It is known that Mr. Kithil, while hampered by restrictions against ascertaining and supplying information concerning promiscuous ores sent the bureau in this manner, nevertheless was fraught with a desire to aid the prospector in every way possible, having regard for his orders from Washington. It is therefore interesting to realize that both the man and the means are now available whereby to elucidate the knowledge of stone which has stumped mining individuals of slender resource and convenience.

The sum of \$25,000 is appropriated for each of the recently established experiment stations. It is believed the means are at hand therefore to render valuable service to the mines of the west. A third station may be designated shortly in the Pacific Northwest. Ten mining experiment stations altogether are contemplated.

Raton, New Mexico, will be the site of the nearest mine safety station to Colorado. An all-steel mine rescue car will be stationed there with orders to respond to disaster calls within prescribed territory, which includes Colorado.—The Commercial (Denver).

ARIZONA MINES

Arizona Copper Company turned out 1,800,000 lbs. of copper in June, which was at the rate of nearly 60,000,000 lbs. per annum. The strides which this company has made in increasing its output since Dr. Ricketts completely remodeled the smelter have been noteworthy, and the current rate of operations represents a record volume for this Scotch-owned mine in the American Southwest.

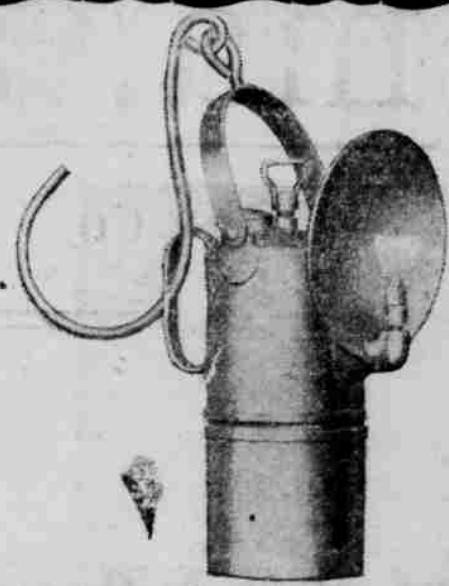
Pinel Development Company has ore ready to ship to the smelter at Hayden. The company will begin in September the sinking of a vertical shaft, to a depth of 500 feet, to open sulphide ore. Gasoline engines for hoist and air compressor will be used for the present.

For approximately \$100,000 the Green Monster Company has taken over 12 new adjoining claims. Several units of the machinery plant, which is to be installed at the collar of the deep-working shaft, on the Green Monster property, have arrived and the remainder are on the way. The new roadway leading to the company's camp from the main trail to Jerome has been completed with the exception of a few culverts, and the work of erecting the camp buildings is well advanced. As soon as the mine machinery is in operation the crew of miners will be augmented with a view to opening the ore bodies at depth in the shortest time compatible with safe and sane mining operations. In the interim work will be continued in the various tunnels for the purpose of making developments which will serve as a guide to operations in the underlying strata of copper ore.

Recent developments in the Loma

Stringer of ore showing native copper have been encountered in the limestone capping at a depth of 400 feet in the Dundee-Arizona shaft. The property is located in the Jerome district, and is viewed with favor by the mining men of that section. Con-

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NEW MACHINERY FOR MIAMI MOTHER LODE

New machinery has been ordered for the Miami Mother Lode, according to William Schaffer, manager of the property, who, with Mrs. Schaffer, has just returned from a trip to El Paso, says the Arizona Record. Mr. Schaffer says the machinery will be shipped at once and that developments at this promising property will proceed without delay. Among other improvements at the

property will be the installation of an air compressor and engine and it is expected that the company will cut into the high tension electric line between Inspiration and Superior and thus furnish power for the workings. The company expects to sink the Cracker Jim shaft to a distance of 500 feet. At the present time the shaft is down 142 feet and a good grade of milling ore has been encountered at the bottom.

This property has now passed the prospect stage and is ready to enter the ranks of the real mines of the district, in the opinion of mining men who have been closely watching its development.

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36x4 1/2 21.25	4.10	4.50
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THE MAIN BIG LEDGE CROPS IN SOME PLACES OVER A HUNDRED FEET WIDE. We have only cut three feet of this new ore and how much of a body of it no one can tell until we do more work, but there is ample room for ENORMOUS BODIES OF IT and I feel certain that it will also lead us to bodies of HIGH GRADE \$100 A POUND BONANZA ORE. The geological and mining conditions are perfect and I believe we are going to open up one of the big bonanza mines of America there. I am personally in charge of the work and I draw no salary, neither do any of the other officers of the Company. THE COMPANY OWNS THE PROPERTY ALL PAID FOR and we are doing clean, legitimate mining and offer others who wish to join us an opportunity where A SMALL AMOUNT INVESTED NOW MAY MEAN A FORTUNE FOR YOU BEFORE LONG. Consolidated Virginia went from 17c a share to over Six Hundred Dollars a share when they struck their bonanza ore bodies—and they never had ore as rich as the famous Glory Hole High Grade.

Engineers say we have the making of a Big Bonanza Mine and that WE WILL GET THE HIGH GRADE HUNDRED DOLLAR A POUND ORE AGAIN. I extend an invitation to engineers and anyone else interested to visit the property and see for themselves just what we have, whether they wish to buy stock or not. ALL THE MINERS HAVE STOCK AND LOCAL PEOPLE RIGHT HERE WHO KNOW THE MINE ARE BUYING IT NOW.

IF YOU ARE AFRAID TO TAKE A CHANCE I don't want your money, but if you are willing to take a clean honest risk and invest a little money where you stand a chance to make a fortune if we strike high grade bonanza ore or open up large bodies of milling ore THIS IS THE BEST OPPORTUNITY YOU EVER HAD. I FEEL CERTAIN THAT WE ARE GOING TO GET IT—and I have been pretty lucky or intelligent in picking properties that are good.

The price of stock TODAY is Ten Cents a Share. It will be raised to Fifteen Cents a share ON OR BEFORE SEPT. 25th. If you want Glory Hole Bonanza Mines Co. stock at 10c a share GET IT NOW WHILE YOU CAN. We may strike High Grade Bonanza Ore any day and have no more stock for sale. Send for illustrated folder showing where we have just struck it and what we have.

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GETTING RIGHT CLOSE TO IT NOW